Glacier National Park

Statement for Management

November 1985

National Park Service - United States Department of the Interior

This statement for management provides an inventory of the conditions and a listing of problems at Glacier National Park. It identifies resource, visitor use and management issues and describes the park's present and future responses to these concerns. It does not prescribe solutions to problems, but will be used by park management to determine the nature and extent of required plans and studies to be programmed in the annual outline of planning requirements and will be updated every two years.

Recommended by: Robert C. Haraden Jan. 15, 1985
Superintendent Date
Glacier National Park

Approved by: Jack Neckels 11/13/85
Regional Director Date
Rocky Mountain Region Acting

I. LOCATION

Glacier National Park is in northwestern Montana, adjacent to the international border with Canada as shown on the Vicinity Map. The western portion of the park is in Flathead County, and the eastern part is in Glacier County.

II. PURPOSE AND SIGNIFICANCE

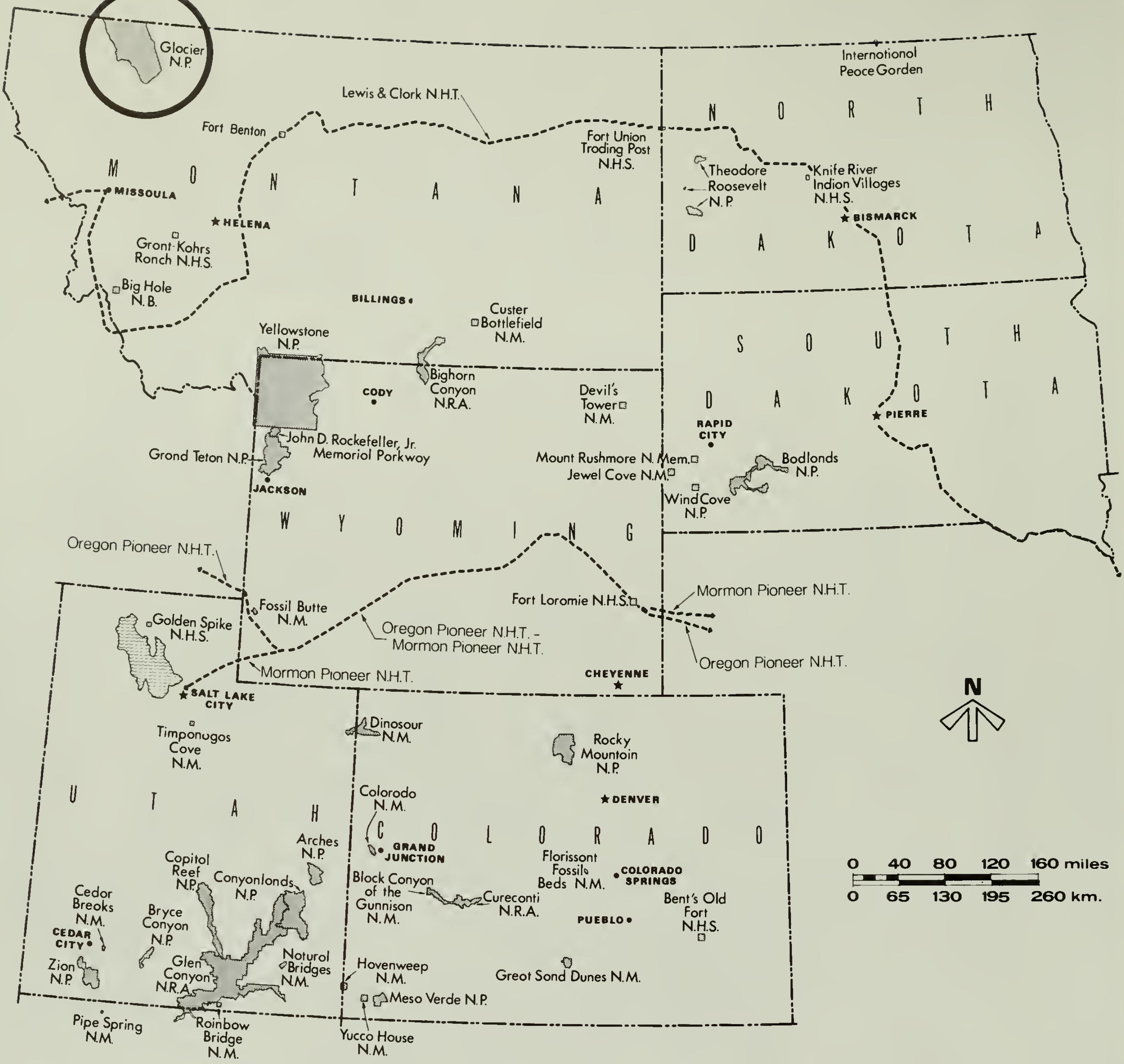
The purpose of Glacier National Park is defined in the following four official actions.

1. The park's establishment legislation, 36 Stat. 354, of May 11, 1910, defines its purpose as ". . .a public park or pleasure ground for the benefit and enjoyment of the people of the United States. . .in a state of nature so far as is consistent with the purposes of this act, and for the care and protection of the fish and game within the boundaries thereof." This legislation also provides for the right of private landowners in the park to compatible use and enjoyment of their land.

2. The National Park Service which administers Glacier National Park was established by 39 Stat. 534, dated August 25, 1916, which in part states its purpose to "conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations."

3. The park's purpose was expanded by Presidential Proclamation Number 2003 of June 30, 1932, to commemorate the friendship and goodwill of Canada and the United States, through the establishment and management of Glacier National Park in the United States and Waterton Lakes National Park in Canada as an International Peace Park.

4. The park was designated by the United Nations Educational, Scientific, and Cultural Organization (UNESCO) as a Biosphere Reserve under the Man and Biosphere Program (MAB) in 1976. This designation recognized Glacier's conifer forests, alpine tundra, diverse biotic communities, and other unique environmental qualities and lends greater support and depth to the themes of Preservation (to conserve for present and future human use the diversity and integrity of biotic communities, and to safeguard the genetic diversity of species), Research, and Education (to provide areas for ecological research including base line studies, both within and adjacent to Glacier) while also allowing for human use.



ROCKY MOUNTAIN REGION

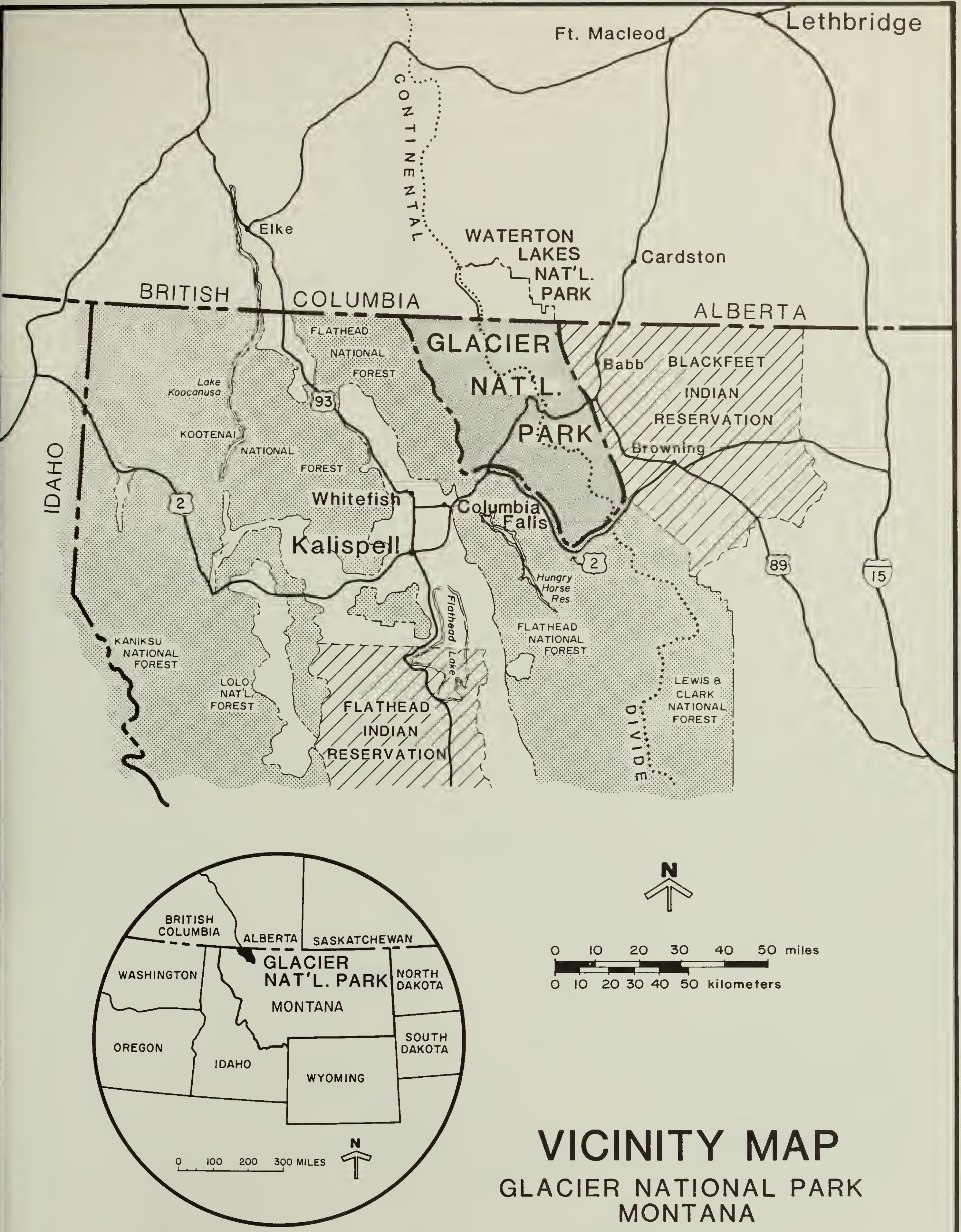
National Park Service

United States Department of the Interior

Legend

- • Locations of Major Cities
- ★ Locations of State Capitals
- State Boundary Lines
- National Park Service Areas
- ----- National Park Service Historical Trails

955 | 80,000-C
DEC '84 | RMRO



VICINITY MAP

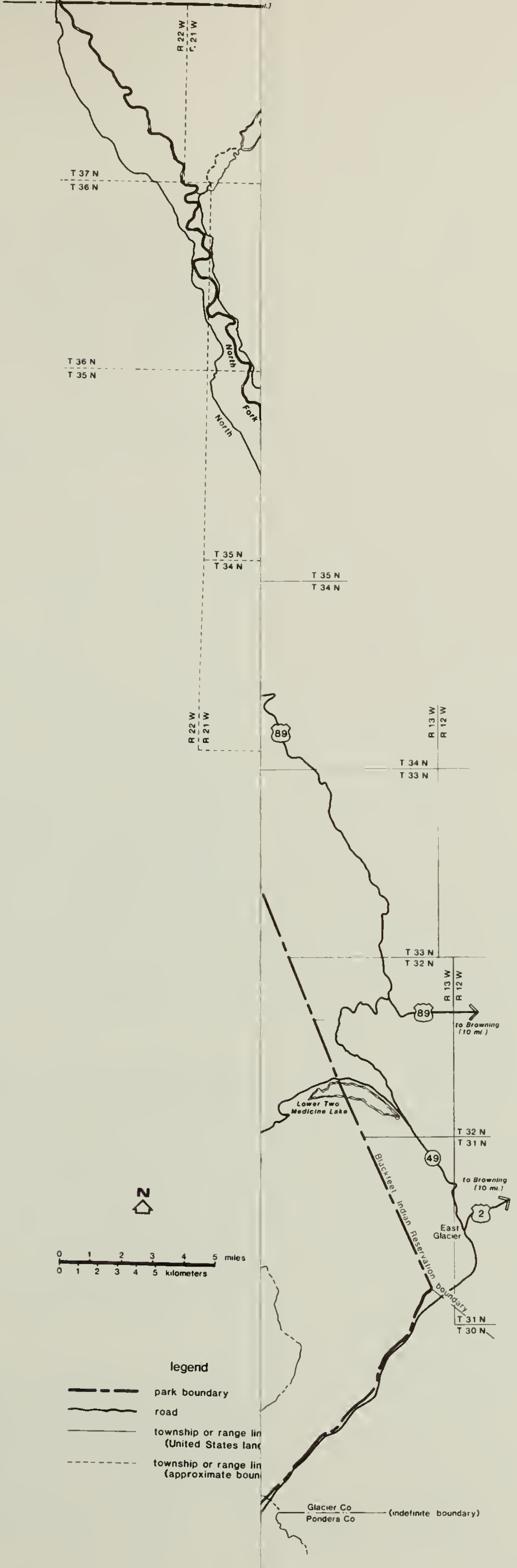
GLACIER NATIONAL PARK
MONTANA

U.S. DEPT. OF THE INTERIOR - NATIONAL PARK SERVICE

117 | 80,015
2-11-83 | RMRO

Digitized by the Internet Archive
in 2012 with funding from
LYRASIS Members and Sloan Foundation

http://archive.org/details/glaciernationalp85nati

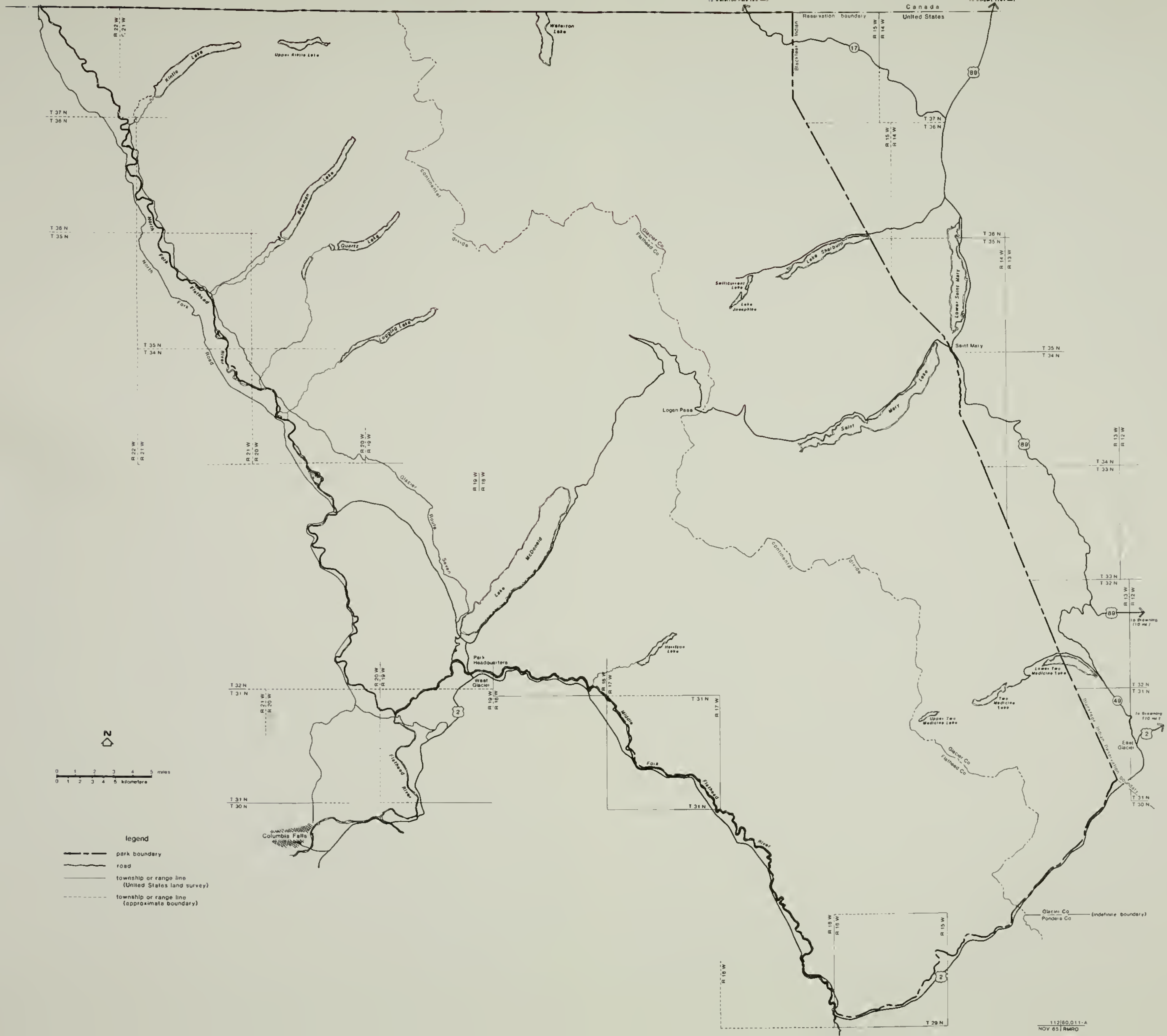


Boundary Map
Glacier National Park

Glacier and Flathead
Counties, Montana

United States Department
of the Interior
National Park Service

112|80,011-A
NOV 85|RMRO



Boundary Map
Glacier National Park

Glacier and Flathead
Counties, Montana

United States Department
of the Interior
National Park Service

Glacier National Park is the only National Park System area located within the Northern Rocky Mountains physiographic region. The park contains outstanding examples of mountain systems, work of glaciers, mountain lakes and streams, geologic history, wildlife, and vegetative types including tundra and Boreal and Pacific forests.

The park is visited by over two million persons from the United States and other countries each year.

III. INFLUENCES

The operation of Glacier National Park is influenced by a variety of legal and administrative constraints, resource and visitor use needs, and existing and planned use of park lands. These influences are described as follows:

A. LEGISLATIVE AND ADMINISTRATIVE CONSTRAINTS

1. National Park Service Organic Act of 1916, 16 USC 1, established the National Park Service to "promote and regulate the use of parks. . ." and defined the purpose of National Parks "to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such a manner and by such means as will leave them unimpaired for the enjoyment of future generations." This law provides overall guidance in managing Glacier and other units of the National Park System. It sets the tone for National Park Service policies which strive to protect park resources and make the parks available for public use.

2. National Environmental Policy Act of 1969, 42 USC 4321, established a national policy to promote harmony between man and nature and a process for implementation of this policy. It is the basis for the National Park Service planning process which requires that significant actions that affect the park be evaluated with consideration of their impacts to park resources and visitor use, and that the process be documented. This process is used at Glacier National Park to evaluate and make decisions on a variety of actions involving development, resource management, and visitor uses.

3. National Historic Preservation Act of 1966, 16 USC 470, and Executive Order 11593 provides a process for recognition and protection of historically significant properties. Glacier National Park contains many prehistoric sites and historic hotels, ranger stations, maintenance structures, bridges, and cabins which are protected under the provisions of this act and the two acts described in 11 and 12 below.

4. Wilderness Act of 1964, 16 USC, 1131, provides for the designation of national wilderness areas. Under the provisions of this law, 963,155 acres of Glacier National Park have been recommended to Congress for designation as wilderness areas; however, no congressional action has been taken on this recommendation.

5. Wild and Scenic Rivers Act, 16 USC, 1271, established the national wild and scenic rivers system. The North and Middle Forks of the Flathead River, which border Glacier National Park along with the South Fork, have been designated as a wild and scenic river. Glacier National Park cooperates with the U.S. Forest Service in managing the river to protect its scenic and recreational values.

6. Endangered Species Act of 1973, 16 USC 1531, provides for the conservation of endangered and threatened species. Glacier National Park and contiguous areas contain several endangered plant species and habitat for the threatened grizzly bear and the endangered bald eagle and gray wolf.

7. Federal Water Pollution Control Act Amendments of 1972, 33 USC 1251, and Executive Order 11752, provide for the prevention, control, and abatement of water pollution. This act and the Safe Drinking Act which follows are the basis for the park's aggressive program of protecting high quality standards for park waters.

8. Safe Drinking Water Act, 42 USC 300, regulates contamination of drinking water.

9. Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, 42 USC 4201-4638, 4651-4655, provides for appraisal of private property and compensating persons displaced by Federal projects. The provisions of this act apply when the National Park Service purchases any of the 154 parcels of private land in the park.

10. Concessions Policy Act of 1965, 16 USC 20, provides for the use of concessioners to provide needed visitor services in national parks. It is the basis for managing the services and operations of the park's six concessioners.

11. Historic Sites Act of 1935, 16 USC 461-467, established policy to preserve historic resources of national significance.

12. Archeological and Historical Preservation Act of 1974, 16 USC 469c, provides for protection of cultural resources which are threatened by Federal construction projects.

13. Clean Air Act, 42 USC 1857, and Executive Order 12088 establishes air quality standards for National Park Service areas and provides for monitoring. Glacier National Park has an active air quality monitoring program based on this act.

14. Architectural Barriers Act of 1968, 42 USC 4151, requires that facilities and programs be made accessible to handicapped persons. As new structures are constructed or substantial modifications are made to existing structures, they are made accessible to handicapped persons.

15. American Indian Religious Freedom Act, 42 USC 1996, provides for the practice of Indian religion on Federal lands and the return of Indian religious objects. Indian religious sites are on the east side of the park.

16. Civil Rights Act of 1964, prohibits discrimination on the basis of race, color, religion, sex, or national origin. This act and the Equal Opportunity Act which follows apply primarily to employment policies of the park.

17. Equal Opportunity Act of 1972, defines the responsibility of Federal Agencies for nondiscrimination and affirmative action.

18. Executive Orders:

a. 11593, provides for protection and enhancement of the cultural environment

b. 12088, provides for control of wastes and pollutants

c. 12003, provides for energy conservation

d. 11507, provides for air and water pollution abatement projects

e. 11644, relates to the control of snowmobile use

f. 11988, restricts development in floodplains

g. 11990, provides for protection of wetlands.

19. Migratory Bird Treaty Act of 1918, provides for protection of migratory bird species such as the bald eagle which utilizes the park during its annual fall migration.

B. RESOURCES

Glacier National Park is recognized as one of the world's most significant natural areas. The park is a rugged mountainous preserve of 1,013,595 acres characterized by spectacular topography, active glaciers, and unique biotic communities. It encompasses vast boreal ecosystems west of the Continental Divide of the Northern Hemisphere, as well as the semiarid foothills of the Rocky Mountain front to the east. Extensive alpine meadows and glacially sculptured peaks straddle a triple divide from which pristine waters descent to three of the world's major oceans. Glacier is the only national park in the Western Hemisphere with headwaters that flow ultimately into the Arctic, Atlantic, and Pacific Oceans. From the high peaks, sweeping scenic vistas are enhanced by clear mountain air, with visibility extending up to 200 miles. Wide variations in elevation, climate, and vegetation types on both sides of the Continental Divide encourage substantial biological diversity, and offer sanctuary to numerous endangered, threatened, or rare species of North America.

Glacier shares a 39-mile boundary with British Columbia and Waterton Lakes National Park in Alberta, Canada, and is adjacent to a series of designated Wilderness Areas on the south including the Great Bear, Bob Marshall, and Scapegoat Wildernesses. Thus, the park is located at the center of one of the largest intact wild ecosystems of the Rocky Mountain chain--an internationally significant location from the standpoint of scientific, aesthetic, and conservation values. Glacier's features draw over two million park visitors annually, 20 percent coming from nations other than the United States of America.

Fifty small alpine glaciers of relatively recent post-Pleistocene origin dot the higher elevations. These glaciers visibly demonstrate ongoing evolutionary processes of erosion and the development of topographical features. The scenic beauty inherent in the park's numerous hanging valleys, cirques, and aretes--in addition to more than 200 lakes and a 1,450-mile network of streams and rivers--bears evidence of the glacial action that has shaped and continues to shape the geography of the region. For example, throughout the summer, Upper Grinnell Lake contains huge blocks of ice--broken from the glacier above--which still grinds away at the surrounding cirque walls.

The geological features of Glacier National Park are unique in several ways. Not only are the layers of the Precambrian Belt Supergroup extraordinarily well-delineated in the 33 percent of the park that is above tree line, but the layered sedimentary structures have been unusally well-preserved in the dry eastern-slope climate. The Belt Supergroup in Glacier also contains the most diverse and best preserved assemblage of stromatolites, fossilized algae, and bacteria on the continent. Furthermore, the Lewis Overthrust Fault, a classic example of an overthrust fault, is exceptionally visible in the park.

The complex ecosystems of Glacier National Park provide habitats for more than 300 terrestrial wildlife species, including several endangered or threatened birds and mammals, and many rare species. As the central core section of a vast de facto international wilderness region, Glacier offers a sanctuary and corridor for Canadian and United States wildlife interaction, migration, and genetic exchange.

The most significant scientific feature of Glacier's flora is its diversity. The park is a meeting ground for species representing five major floristic provinces. In addition to the predominant Northern Rocky Mountain flora, many species of Great Plains affinities grow along the eastern slopes, and a wide variety of arctic-alpine plants occur above timberline. Numerous Pacific slope and boreal species reach their southern and eastern limits in the park. Major factors contributing to this high floristic diversity include the contrast between climates of the east and west sides of the Continental Divide, the sharp topographical relief, and the wide range of soil acidity or alkalinity.

The vast floral diversity of these varied habitats provides a significant reservoir of genetic material. Twenty-six rare Montana plants have been recorded in Glacier Park (Lesica, 1984) of which 18, or 69 percent, are found only in the park and its immediate environs. The integrity of the park's floral species remains largely intact at the present time.

Although Glacier National Park is basically a natural heritage preserve, past human activities have contributed important cultural features as well. Park cultural resources include prehistoric sites in addition to historic lodges, cabins, administrative buildings, Going-to-the-Sun Road, and an extensive trail system.

The park encompasses 27 known prehistoric sites, some dating back to around 1000 B.C. Archeological artifacts, and other evidence indicates that Glacier served as a base for native American hunting and gathering camps--particularly along the shores of St. Mary and McDonald Lakes. The mountain passes provided travel corridors for Blackfeet raiding parties, and it also provided for Kootenai, Kalispell, and Flathead tribal migrations to the Great Plains for seasonal buffalo hunts. Some evidence suggests the use of Chief Mountain and the Two Medicine area as ceremonial or religious focal points for members of the Blackfeet tribe. Many of the park's place names are of native American origin.

C. LAND USE AND TRENDS

The 869 acres of non-Federal land in Glacier National Park are either undeveloped or are used for residential, recreational, or commercial purposes. Most commercial uses occur at the Apgar developed area. Most private tracts are small lots, but a few comprise 50 or more acres. Most of the residential and all of the commercial uses occur during the mild summer season. The park is in the process of preparing a Land Protection Plan that gives additional information on the private lands.

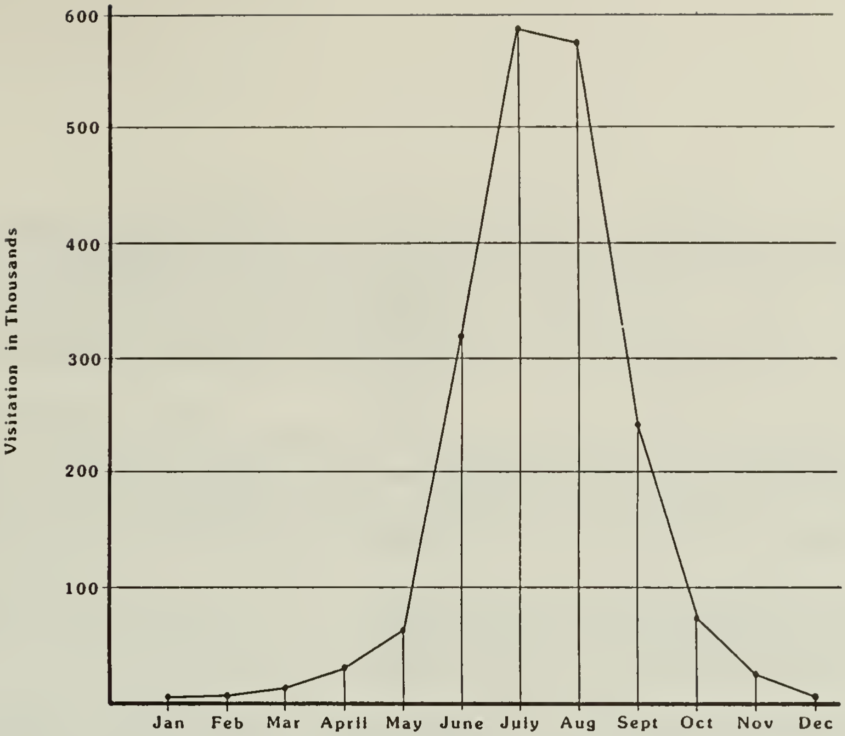
Outside the park, land is primarily undeveloped or is used for such activities as agriculture, timber, and grazing. Residential and commercial uses are common in and near the several towns located at the park boundary, and recreational or second-home land uses are increasing. The Flathead National Forest shares some 130 miles of boundary with the park in the North Fork and Middle Fork areas. Two gas wells have recently been developed near the park boundary near Marias Pass and in the North Fork drainage. The Flathead Valley is the closest major population center to the park. Its estimated population in 1980 was 50,000. Included in the valley are the towns of Kalispell, Whitefish, and Columbia Falls.

D. VISITOR USE ANALYSIS

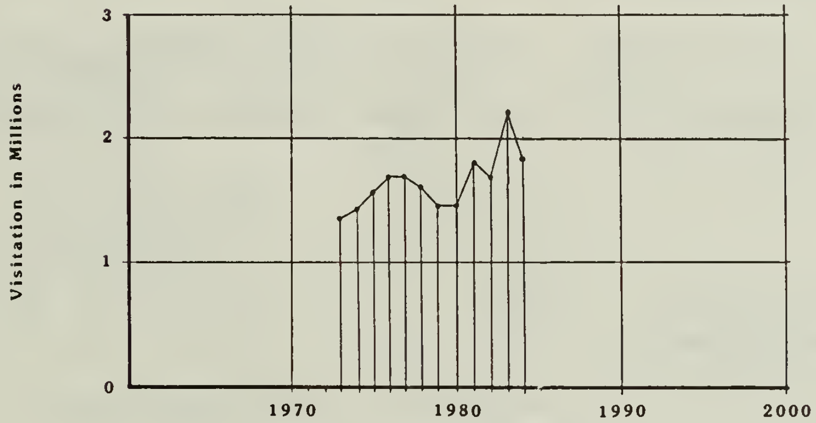
Since 1974, visitor use of Glacier National Park has increased at an average annual rate of 4 percent with 1,947,000 persons visiting the park in 1984. Almost 18 percent of the park's visitors are from Montana with 13 percent from adjacent Alberta, Canada. Approximately 19 percent of the park's visitors originate in the three West Coast States with an additional 18 percent from the midwestern and 6 percent from the mountain states. Visitation from countries other than the United States and Canada is about 2 percent. Total annual use, annual back-country use, and monthly use trends are shown on the visitor-use graphs. Primary visitor activities include sightseeing, hiking, camping, picnicking, fishing, and boating. Glacier National Park's peak season occurs during the short summer with 77 percent of the use in the months of June through August.

E. FACILITIES AND EQUIPMENT ANALYSIS

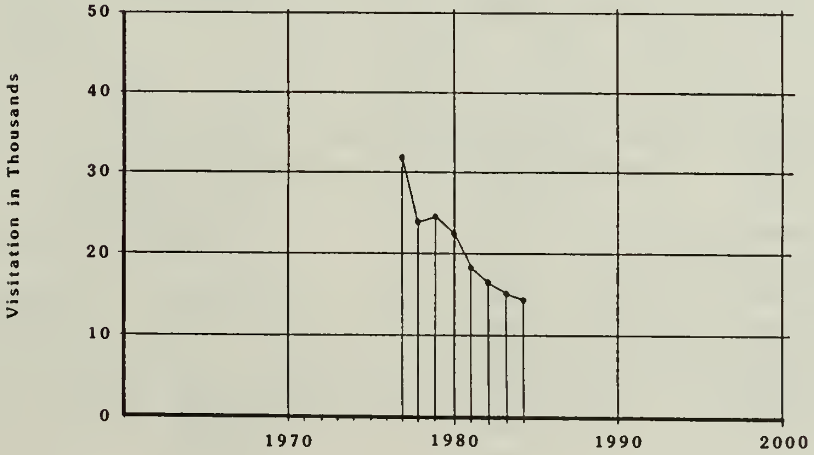
The following data are available at the Glacier National Park Superintendent's Office and at the Rocky Mountain Regional and Denver Service Center Offices:



Monthly Visitation - 1984



Total Annual Visitation



Annual Overnight Backcountry Use

Glacier National Park

1. Roads and Trails: Drawing No. 117-80,003-B, sheets 1-3. There are approximately 130 miles of paved roads, 100 miles of unpaved roads, and 700 miles of back-country trails in the park. There are about 3 miles of asphalt trail in the Apgar area and 2 miles of boardwalk at the Logan Pass and Avalanche areas.

2. Buildings and Structures: Drawing No. 955-80,004, sheets 1-4. There are approximately 560 buildings in the park. Many of these are historic and are listed or eligible for listing on the National Register of Historic Places.

3. List of Classified Structures: This listing of historic structures in the park is currently in progress, and some 300 structures are being considered for inclusion.

4. Utility System Maps: There are 28 water systems, 41 sewer systems, 3 sewage treatment plants, and 10 electrical systems in the park. They are further summarized on Drawing No. 955-80,004, sheets 1-4.

F. STATUS OF PLANNING - The following plans exist or are in progress at Glacier National Park. Copies may be reviewed or obtained from the Superintendent upon request.

General Plans	Preparer	Date Approved	Comment on Adequacy
Master Plan	DSC	2/77	Adequate
Wilderness Recommendation	Park	3/74	Adequate
Resource Management Plan	Park	5/83	Adequate
Cultural Resource Management Plan	Park	In progress	
Interpretive Prospectus	Park	7/80	Inadequate
Outline of Planning Requirements	Park	6/84	Adequate
Statement for Interpretation	Park	1/84	Adequate
Action Plans			
EEO Affirmative Action Plan	Park	1/82	Adequate
Land Acquisition Plan	Park	9/80	Adequate
Land Protection Plan	Park	In progress	
Concessions Management Plan	DSC	1/84	Adequate
Back-Country Management Plan	Park	5/79	Adequate
Bear Management Plan	Park	5/84	Adequate
Forest Fire Management Plan	Park	7/78	Adequate
Flood Plain Management Plan	Park	7/78	Adequate
Eagle Management Plan	Park	9/82	Adequate
Structural Fire Plan	Park	12/80	Adequate
Hazard Tree Plan	Park	6/83	Adequate

Logan Pass Management Plan	Park	4/79	Adequate
Back-Country Wilderness Maintenance Plan	Park	3/76	Adequate
Wolf Management Plan	Park	76	Adequate
Apgar Development Concept Plan	Park	3/82	Adequate
Airshed Management Plan	Park	5/83	Adequate
Water Resource Management Plan	Park	In progress	
Many Glacier Development Concept Plan	DSC	In progress	
St. Mary Development Concept Plan	DSC	In progress	
Lake McDonald Development Concept Plan	DSC	In progress	
North Fork Development Concept Plan	Park/DSC	In progress	
Scope of Collection Statement	Park	83	Adequate
Transportation Plan	DSC	In progress	

Special Studies/Projects

Air Quality Study	Park	In progress	
Water Quality Study	Park	In progress	
Going-to-the-Sun Overlook Study	Park	In progress	
Flathead Environmental Impact Study Reports Special Task Force		6/83	Adequate
Science Assessment Program	Park	In progress	

G. EXISTING MANAGEMENT ZONING.

Zoning of lands in Glacier National Park is shown on the Existing Management Zoning Map. It establishes a broad framework for specific planning decisions on the use and development of park lands. Four major zones--natural, historic, development, and special use--have been designated. Within these zones, subzones are identified to further clarify the intended land use. Acreages within these zones are shown on the zoning map.

1. Natural Zone

Management emphasis in the natural zone stresses conservation of natural resources and perpetuation of natural processes. Uses or facilities that do not adversely affect these processes or resources are permitted. Two subzones are designated in this zone: Natural Environment, characterized by heavily used natural areas with dispersed facilities, and Wilderness which is characterized by primeval character, lack of facilities, and a low level of visitor use. Lands in the Wilderness Subzone have been recommended by the National Park Service for designation by Congress as wilderness.

2. Historic

Management emphasis in this zone is for the preservation, protection, and interpretation of cultural resources and their settings. There are 14 historic zones in the park.

3. Development

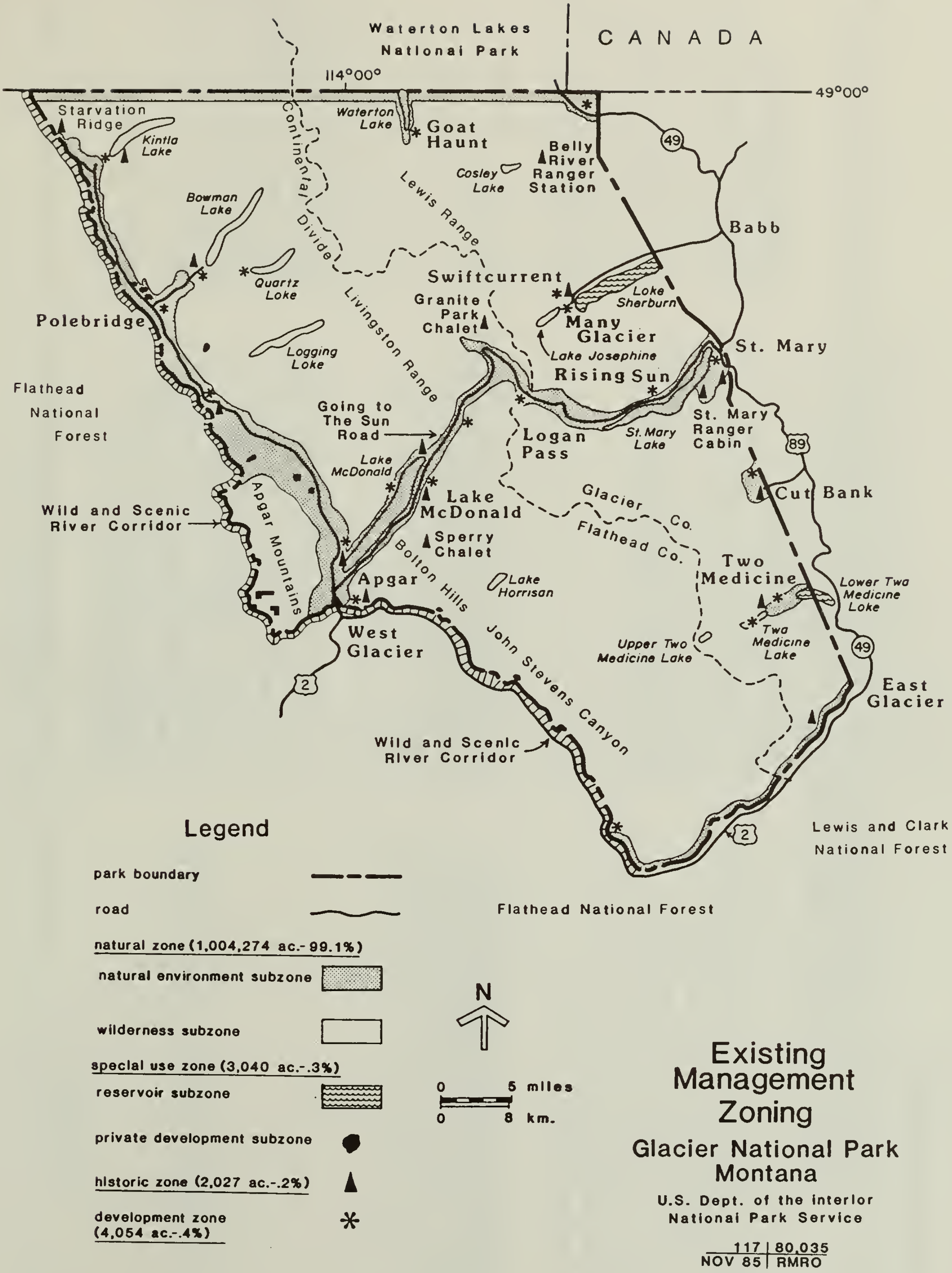
Emphasis in this zone is on providing facilities to serve the needs of park visitors and management. There are 19 development zones in the park.

4. Special Use

This zone comprises land in use by other government agencies or privately-owned lands within the park. There are 153 tracts of private land and 1 reservoir included in this zone in the park.

IV. & V. MAJOR ISSUES AND MANAGEMENT OBJECTIVES

A numbered reference to these specific laws and executive orders in prior sections follows the· description of each issue. In addition to listing major issues of concern, the park's present and anticipated future responses to these issues is described.



Existing Management Zoning
Glacier National Park
Montana
U.S. Dept. of the interior
National Park Service

117 | 80,035
NOV 85 | RMRO

A. NATURAL RESOURCES

OBJECTIVE: To conserve for present and future human use the diversity and integrity of biotic communities within natural ecosystems and to safeguard the genetic diversity of species on which their continuing evolution depends.

ISSUES	CURRENT RESPONSE	FUTURE RESPONSE
1. Genetic Diversity. There is a need to perpetuate the natural level of diversity in the park's gene pool to insure that this resource remains in tact for the enjoyment and use of future generations. 1,2,6.	a. Membership in United Nations Educational, Scientific and Cultural Organization, and Man and the Biosphere Program.	Establish areas where studies of can be conducted to identify how changing plant and animal systems relate to each other and how man's activities affect them.
2. Contiguous Areas. There is a - potential for the degradation of the park's natural resource base because of incompatible management of adjacent lands. 1,2,6,8,13,18-b.	a. The park has an ongoing program of monitoring air and water quality and noise to serve as a basis for identifying and responding to adverse influences.	Continue efforts.
	b. Cooperate with British Columbia officials, Flathead and Lewis & Clark National Forests, Flathead Basin Commission, Waterton Lakes National Park, Flathead and Glacier Counties, the State of Montana, and the Blackfeet Tribe in joint planning efforts.	Continue to expand liaison with officials involved in managing lands adjacent to the park.
	c. Encourage the formation of a local land trust.	

OBJECTIVE: To conserve and maintain native threatened and endangered wildlife species and habitat.

ISSUES	CURRENT RESPONSE	FUTURE RESPONSE
1. Bears. There is a need to determine how human presence and habitat destruction affects bear population. 1,2,6,18-g.	a. Ongoing research effort.	Provide a basis through studies for minimizing impacts between humans and grizzly bears in the park in situations where improved access or recreation activities are leading to unwanted bear losses.
2. Bears. There is a need to minimize the number of bear/human encounters resulting in injury and mortality. 1.	a. Temporarily exclude humans from specific back-country zones.	Continue current response.
	b. Implement Bear Management Plan.	Annual update of plan.
	c. Promote visitor understanding of need through interpretation.	
3. Bears. There is a need to enhance, protect, and perpetuate natural habitat for grizzly bears. 1,2,6,18-g.	a. Landsat classification is being developed as a basis for identifying and monitoring plant communities in the park.	Expand natural fire zones in the park ecosystems.
	b. Regional cooperation with other government agencies in defining bear habitat is being pursued.	

4. Bears. Food abundance and distribution may influence bear behavior with implications to the park's bear management program and visitor safety.	a. Research is being conducted on the annual production and distribution of bear foods.	
5. Wolves. There is a need to protect enhance and perpetuate natural habitat and population status of wolves, 1,2,22.	a. Continue support for wolf ecology project.	Expand natural fire zones in the park ecosystems.
	b. Maintain observation data from National Park Service personnel and park visitors.	Prepare wolf plan.
	c. Continue outside agency cooperation in overall recovery efforts.	
6. Eagles. Large concentrations of Bald Eagles migrate to McDonald Creek and feed on nonnative fishes such as Kokanee Salmon. 1,2,6,18-f, 18-g,19.	a. Exclude human use from lower McDonald Creek and major roosting areas during autumn. Locate active nests.	Continue current efforts and complete an eagle nesting ecology study as a basis for future plans.
	b. Implement Eagle Management Plan.	Maintain cooperation with State of Montana.
	c. Protection efforts currently realize the value of nonnative salmon species to the Bald Eagle.	Contact public in viewing areas.
	d. Promote visitor understanding through interpretation.	

7. Eagles. Protection of existing and historic Bald Eagle nests is needed. 1,2,6,19.		
8. Caribou. There is an absence of woodland caribou originally known to have inhabited park lands. 1,2.	a. Landsat classification is being developed as a basis for identifying and monitoring plant communities in the park.	Provide a basis to evaluate the reintroduction of the woodland caribou into the park ecosystem.
9. The range of threatened and endangered plan species in the park needs to be identified. 1,2,6.		

OBJECTIVE: To enhance, protect, and perpetuate the aquatic ecosystem in a natural and undisturbed state.

ISSUES	CURRENT RESPONSE	FUTURE RESPONSE
1. Fishes. Historic fish communities have been disrupted by human activities. 1,2,7,18-b,18-d,21,22.		Review all park plans to avoid adverse impacts.
2. Cutthroat Trout. There is concern for the ecological status of the Cutthroat trout in park waters. 1,2,6.	a. Revision of fishing regulations to minimize harvest of native fishes and to increase harvest of nonnative fishes.	Initiate research to determine ecological impacts of exotic fish introductions.
	b. Maintain cooperative studies with the U.S. Fish and Wildlife Service.	
3. Bull Trout and Pygmy Whitefish. Bull Trout and Pygmy Whitefish populations may be unique and deserving of special management. 1,2,6.		Initiate research.

4. Kokanee Salmon may be competing adversely with the native Cutthroat trout species. 1,2,6.		Initiate research.
5. There is a need to evaluate the invertabrate population in park waters associated with logging and mining activities. 1,2,7,18-b,18-f, 18-g.	a. U.S. Fish and Wildlife Service providing study data.	
6. Consumptive use of native fishes by park visitors is reducing the population. 1,2,6.	a. Revision of fishing regulations to minimize harvest of native species.	
7. Oil, gas, and mineral development activities outside the park could potentially pollute park waters through leaching of chemicals in the North Fork area from various sources such as surface runoff & air pollution. 1,2,7,18-b, 18-f,18-g.	a. Continue water chemistry analysis through Yellow Bay Biological Station.	Encourage monitoring program through the Flathead Basin Commission.
8. Logging outside the park could potentially release sediments and affect temperature and flow regimes of rivers bordering the park. 1,2, 7,18-b,18-d.	a. Monitor temperature and flow.	Gather baseline data from main stem of North Fork.
	b. U.S. Fish & Wildlife Servise submits monthly water samples for chemical analysis.	
9. Acid Rain. Development of coal fired power plants could potentially increase acid rain impacts. 1,2,7,18-b,18-d.	a. Monitor development activities outside the park.	
	b. Continued analysis of water samples through the Yellow Bay Biological Station.	

OBJECTIVE: To protect and maintain the park's vegetative ecosystem in a natural and undisturbed state.

ISSUES	CURRENT RESPONSE	FUTURE RESPONSE
1. Fire has, for 50 years, been suppressed from the park's natural ecosystem. 1,2.	a. Man and Biosphere grant to research the effects of fire in Ponderosa and Lodgepole Pine communities.	Initiate and develop additional studies and management actions.
2. Fire. There is a need to determine the historic role of fire in maintaining park plant communities. 1,2.	a. Barrett's fire history of the North Fork.	Continue fire history study to include the entire park.
	b. Key's lightning frequency and stand-age distribution study.	Continue stand-age study.
3. Fire. There is a need to assess potential conditional zones where natural fires may be allowed to burn in prescription and with or without suppression. 1,2.	a. Landsat classification is being developed as a basis for identifying and monitoring plant communities in the park.	Revise Fire Management Plan. Develop fuel loadings.
	b. Fire ecology studies by Kilgore and Wakomoto.	Develop burn prescriptions.
4. Exotic plant species presently exist on park lands. 1,2.	a. Inventorying species and monitoring and mapping the spread locations of exotics.	Initiate knapweed and spurge ecology investigations and research on control measures. Eradicate exotic plant species.

5. Livestock trespass. Domestic livestock trespass into the park has reduced wildlife range, introduced exotic plant species, transmitted diseases, caused erosion, promoted degradation of water quality, and presented a traffic hazard. 1,2.	a. Implement Law Enforcement guidelines.	Extend fencing on park boundary.
	b. Continue to conduct meetings with Blackfeet Tribal Land Board, Council, and owners.	
6. Visitor day use continues to have negative impacts on fragile vegetative communities. 1,2.	a. Monitor and record impacts.	Establish day use carrying capacities for use of critical areas.
	b. Exclude human use temporarily by physical barriers.	Consider the construction of facilities to provide for increased visitor use.
	c. Ongoing revegetation in heavily-impacted alpine areas.	

OBJECTIVE: To protect, conserve, and enhance Class I air quality standards.

ISSUES	CURRENT RESPONSE	FUTURE RESPONSE
1. Man continues to alter the resource for developmental purposes resulting in air pollution. 1,2,7, 18-b,18-d.	a. Maintain membership in the Montana State Airshed group.	Comply with smoke management guidelines.
	b. Establishing baseline data.	
	c. Comply with State Implementation Plan & CAA requirements as Class I area.	Maintain communication with emission sources that may influence the park's Class I air quality.

	d. Maintain membership with the Interagency Environmental Monitoring Committee for acid rain.	Establish effects research.
	e. Monitor the Air Quality resource to establish baseline levels of quality and determine the effects on park resources.	
	f. Implement Resource Management Plan.	
	g. Protect air quality related values such as visibility, water, wildlife, vegetation, and geologic features.	

B. CULTURAL RESOURCES

OBJECTIVE: To identify, evaluate, protect, and preserve the park's archeological, historical, and architectural resources.

ISSUES	CURRENT RESPONSE	FUTURE RESPONSE
1. Identification. Information on location and identification of structures in areas and events important in prehistory or history of Glacier is lacking. 1,3,11,12, 18-a.	a. List of Classified Structures being partially updated.	Complete List of Classified Structures.
	b. Archeological surveys are completed prior to construction.	Prepare historic base maps.
		Complete Archeological Survey.

2. Evaluation. There is a need to evaluate the significance of cultural resources in cooperation with the State Historical Preservation Officer & Council for Historic Preservation. 1,3,11,12,18-a.	a. Evaluating properties for inclusion on the National Register.	Prepare a maintenance guide for historical structures.
3. Preservation. There is a need to catalog and preserve historic and prehistoric structures, sites, objects, and archives. 1,3,11,12, 18-a.	a. Preparing a Cultural Resource Management Plan.	Prepare historic structure reports.
	b. All actions taken are in compliance with applicable laws.	Consider state-of-the art techniques.
	c. Museum collection is being appraised, and storage space has been constructed.	Implement Cultural Resource Plan and Scope of Collection Statement.
	d. Interpretation is used to educate visitors on the value of protecting cultural resources.	As needed, increase interpretation in key areas.
	e. Curators are cataloging the backlog of historic objects.	
4. Maintenance. National Park Service/ Concession-owned structures are becoming more difficult to maintain as listed on the List of Classified Structures. 1,3,10,11,12,18-a.	a. Coordinate with the State Historical Officer & Council for Historic Preservation.	
	b. Considering exclusions.	

5. Information. There is a need to provide information about the park to the staff, the general public, and researchers.	a. Files are being collected and compiled in the library. Rare books are being bought, donated, and preserved.	Complete National Register listings.
	b. Continue to support park management on current concerns such as fire, bears, and law enforcement through the Waterton/Glacier Times. Respond to the 10,000 letters of inquiry a year.	Improve and continue current response.
	c. Effort is being made to collect historical materials. A computer program has been written to facilitate the system.	All library and historical files will be readily accessible via the computer. Update equipment as funds allow.

OBJECTIVE: To protect and perpetuate for American Indians their inherent right of freedom to believe, express, and exercise the traditional religions of the American Indian.

ISSUES	CURRENT RESPONSE	FUTURE RESPONSE
1. There is a need to identify the religious and cultural sites on park lands. 1,2,15.	a. Maintain open communications and relations with Native American Indians.	Complete Cultural Resource Plan. Complete an ethnohistory of park use by special groups.

2. There are concerns with the Blackfeet Tribe regarding ancesteral ties, traditional and ceremonial religious uses, effects of park programs on traditions and cultural values, and access to park lands. 1,2,15.	a. Currently conducting joint staff meetings with Blackfeet Tribe.	Continue current responses.
	b. Renamed park's natural features to recognize Native American heritage.	Continue to improve communications.
	c. Promote cultural demonstration programs.	
	d. Have conveyed East Glacier airport lands to Bureau of Indian Affairs to be held in trust for the Blackfeet Tribe.	

C. VISITOR USE

OBJECTIVE: To enchance safety and provide reasonable protection for the visitor and his property from hazards in the natural and manmade environment.

ISSUES	CURRENT RESPONSE	FUTURE RESPONSE
1. Larceny. There is a need to reduce the number of larcenies occurring in the park. 1,10.	a. Participate in National Computer data collection concerning larcenies.	
	b. Implement Crime Prevention program.	
2. Structural Fire. There is a need to prevent structural fire in National Park Service/concession-owned buildings. 1,10.	a. Maintain and train concession fire brigades for early fire suppression and evacuation procedures.	Encourage concession managers to hire onsite structural fire supervisors.

	b. Developed structural fire prevention and fire protection plans.	Upgrade National Park Service equipment and personnel skills.
3. Traffic Accidents. There is a need to reduce the number of traffic accidents and bicycle/vehicle conflicts on Logan Pass Road. 1.	a. Monitor present traffic pattern and bicycle use to determine alternate use patterns.	Consider the construction of bike trails where appropriate and consider other means such as speed limits and time-of-day restrictions on bicycle traffic to increase safety.

OBJECTIVE: To give visitors a quality experience by providing them with the opportunity to see, enjoy, and appreciate the park's resources to the maximum extent possible without adverse effects on these resources and visitor safety.

ISSUES	CURRENT RESPONSE	FUTURE RESPONSE
1. Use Season. There is a need to provide facilities, service, and access throughout the year for "off-season" enjoyment. 1.	a. Considering winter use option at McDonald Lodge area.	Identify and evaluate those park areas worthy of "off-season" consideration.
2. Accessibility. There is a need to make facilities and programs available for special populations and employees including physically and mentally handicapped, the elderly, small children, or those people not fluent in the English language. 1, 10, 14.	a. Some National Park Service structures have been altered to accommodate the handicapped. b. Children's programs are designed, produced, and presented at Apgar/St. Mary. c. Park brochures are available in Japanese, French, German, and Spanish.	Inventory facilities and develop list of needs to accommodate special populations and employees. Continue current responses.

	d. Tactile exhibits and park brochure tape are available for the visually impaired.	
	e. Program texts are available for hearing impaired.	
3. Noise. Helicopter scenic flights over the park and seismic blasting on adjacent lands have generated concern regarding aesthetic noise intrusion and wildlife disruption. 1,2,4,6.	a. Establish and maintain open communications to mitigate wilderness use conflicts. b. Mutually agree upon alternate air routes which may reduce complaints and protect wildlife and wilderness values. c. Coordinate environmental impacts with State of Montana and U.S. Forest Service.	Work closely with the Federal Aviation administration to determine if legislation measures would be appropriate.

OBJECTIVE: To make available diverse opportunities for public recreational activities in locations and at intensity levels that are compatible with long-term perpetuation of natural and cultural resources.

ISSUES	CURRENT RESPONSE	FUTURE RESPONSE
1. Overuse. Continued increase of visitor numbers has the potential of degrading the resource and jeopardizing the quality of the experience. 1,2.	a. Continue monitoring the resource for signs of degradation. b. Monitor visitor complaints concerning crowding and diminished quality of experience.	Conduct a study of the effects of day use of back-country areas.

D. INTERPRETATION

OBJECTIVE: To foster public understanding and appreciation through interpretation of the park's glaciers, geological features, vegetation, wildlife, other natural and cultural resources, and the limitations these resources place on human use.

ISSUES	CURRENT RESPONSE	FUTURE RESPONSE
1. Files. The 9,000-volume-book library, audiovisual equipment, and history files are increasingly more difficult to maintain. 1.	a. The curator and museum will move to new facilities allowing more floor space for library, history files, and slide and photo files.	Secure funding to repair audiovisual equipment.
2. Storage. There is a need to develop a system and storage area to protect, store, catalogue, duplicate, and access 10,000 slides and 8,000 prints in interpretive photos. 1.	a. Organization of files is in progress.	
3. Programs. There is a need to provide balanced interpretation that is responsive to park management and visitor needs.	a. Park programs are monitored for popularity, quality, and pertinence.	Make scheduling changes as needed.
	b. Needs are constantly analyzed for interpretive priorities.	
4. Interpretive Planning. The park's interpretive plans are inadequate.	a. Currently updating the Interpretive Prospectus.	Implement Interpretive Prospectus when approved.

OBJECTIVE: To provide visitors the opportunity to experience the natural phenomena of Glacier safely and nonconsumptively.

ISSUES	CURRENT RESPONSE	FUTURE RESPONSE
1. Bald Eagle Interpretation.	a. Interpreters are stationed at the eagle viewing area to contact the public during viewing hours.	
	b. A visitor contact facility is operated at the trailhead to the eagle viewing area.	
2. Grizzly Bear Interpretation. There is a need to interpret the life history of the grizzly bear and safety practices in bear country.	a. Trail closures due to bears are mentioned in all interpretive programs.	
	b. Several programs are entirely on grizzly life history.	
	c. Safety practices in bear country are disseminated verbally and in literature.	
3. Safe practices and nonconsumptive use needs to be promoted through increased visitor understanding.	a. Safety practices and nonconsumptive use are constantly explained to visitors verbally and through information handouts in visitor centers and in programs.	Several message repeating AM automatic remote radio broadcasting may be installed in the park to increase coverage.
4. There is a need to provide an educational outreach program for area schools.	a. Teacher training sessions are held during the fall.	

	b. Park films and slide programs are available to schools at no charge.	

E. CONCESSIONS

OBJECTIVE: To ensure that the concessioner provides the park visitor with high quality service.

ISSUES	CURRENT RESPONSE	FUTURE RESPONSE
1. Annual performance ratings are average. 1,10.	a. Establish higher operating standards in food service. b. Develop variety in menus at different areas of the park.	Monitor progress of activities.
2. New Glacier Park Incorporated contract requires an improvement in life safety requirements in next 5 years. 1,10,14.	a. Continue monitoring construction for high standards.	Encourage concessioner to provide additional service to handicapped visitors and employees.
3. There is a need to upgrade the park safety and interpretation messages given to the park concession bus drivers. 1,10.	a. The National Park Service and concession staffs are working closely together to develop new brochures. b. The National Park Service and concession staffs are cooperating to develop new employee orientation programs. c. Concession direction is provided through the park's master plan, development concept plans, and concession plan.	Followup with distribution and visitor contact.

OBJECTIVE: To provide concession services and facilities that serve essential needs of park visitors which cannot be accommodated at locations outside.

ISSUES	CURRENT RESPONSE	FUTURE RESPONSE
1. Concessioners feel there is a need for additional rooms and facilities inside the park. 1,10.	a. Concession lodging may be traded between developed areas, however, allowing for no overall increase.	
2. There is a need to evaluate guide services and their application to the park. 1,10.	a. Allow, on a limited basis, a backpacking guide service to operate in the park.	Monitor results and evaluate as part of cumulative effects of all commercial activities.

OBJECTIVE: To insure that appropriate residential facilities are available for concession employees in the park.

ISSUES	CURRENT RESPONSE	FUTURE RESPONSE
1. There is a need to relocate and upgrade concessioner employee residential facilities at several developed areas. 1,10.	a. Current development concept plans propose relocation and upgrading of residential facilities.	Implement development concept plans.

F. MANAGEMENT EFFECTIVENESS

OBJECTIVE: To provide equal employment opportunity for all through the elimination of discrimination in the work place.

ISSUES	CURRENT RESPONSE	FUTURE RESPONSE
1. Both seasonal and permanent work forces are below the national averages for minorities.	a. Actively recruit in various communities and educational facilities.	Increase percent of minorities that are qualified.

	b. Task Force established to study ways to make women and minorities aware of non-traditional career opportunities in the National Park Service.	
2. Women represent 18 percent of work force in Glacier which is below U.S. and State percentages. 16,17.	a. Actively recruit qualified individuals from hiring registers and encourage potential candidates to become qualified and assist them with applications.	Increase percentage of women in nontraditional career categories.
	b. Task Force established to study ways to make women and minorities aware of non-traditional career opportunities in the National Park Service.	Increase percentage of women that are qualified.
3. There is a need to evaluate vacant positions from the standpoint of Equal Opportunity and Affirmative Action potential. 16,17.	a. Responsibility is currently reflected in management position standards.	
4. There is a need to identify underutilized employees and those in lower graded positions with little opportunity for career advancement. 16,17.	a. Where possible, employees have been given opportunities to move up and/or expand their potential.	Develop a system to identify skills of underutilized employees.

OBJECTIVE: To manage the park in the most effective and efficient manner utilizing existing funding and personnel in the park's Administration, Resources Management and Visitor Protection, Interpretation, Maintenance, and Research Divisions.

ISSUES	CURRENT RESPONSE	FUTURE RESPONSE
1. There is a need to maintain high standards of performance in accomplishment of stated objectives given a decrease in the permanent and seasonal work force and an increase in workload, mandated legislation, responsibilities, and visitation. 1.	a. Analyze all priorities and delete unnecessary ones.	Consolidate park plans.
	b. Organize automatic data processing operations and design information systems that meet fundamental park decision making needs.	Continue to improve efficiency to accomplish workload through the best management techniques available.
		Utilize professional management assistance.
2. There is a need to determine alternative funding sources to accomplish workload.	a. Evaluate gifts catalogue concept.	
	b. Expand volunteerism.	
	c. Evaluate park operations to determine if funding could be generated through collections for back-country permits, fishing permits, lease fees, search and rescue operations, and emergency medical operations.	
	d. Utilize other Federal sources such as Wyoming Research Center, Fish and Wildlife Service, Forest	

	Service, and Significant Resource Problems.	
3. There is a need to improve the process for park employees to provide input into the park's decision making process.	a. Periodic staff briefings to share information.	Evaluate the review process.
	b. Use of interdisciplinary team concept in planning.	Conduct staff workshops on critical issues.
4. There is a need to meet all the requirements of law and regulations that affect park operations.	a. Evaluate and identify most efficient means to collect data for various outside agencies.	Fund additional positions and training.
	b. Special study of legal responsibilities and resources.	
5. There is a need to improve the accountability of employee performance.		
6. There is a need to provide more incentives for improvement of employee performance.		

OBJECTIVE: To maintain, repair, and rehabilitate park structures, grounds, and equipment.

ISSUES	CURRENT RESPONSE	FUTURE RESPONSE
1. Total man years of labor remain constant in view of increased percent of budget committed to increased salaries with simultaneous decrease in percent of budget being allocated for materials and supplies.	a. Rely on cyclic funding.	Increase materials and supplies.
	b. Rely on special funding projects such as, Life/Safety and PRIP.	Request base funding increase.

G. COORDINATION/COOPERATION

OBJECTIVE: To cooperate with other governmental agencies, private organizations, the Blackfeet Tribe, and members of the public to ensure that land use in the park's vicinity is compatible with long-term perpetuation of the park values.

ISSUES	CURRENT RESPONSE	FUTURE RESPONSE
1. The Blackfeet Tribe has opened their lands to oil/gas exploration in close proximity to park boundary. 1,2.	a. Maintain close, open communications with Tribal leaders to mitigate adverse impacts to resources.	
2. Flathead National Forest and Glacier National Park share management responsibilities of the Flathead River systems. 1,2,5.	a. Closely consult with U.S. Forest Service on management plan.	Establish river use carrying capacity criteria.
	b. Monitor river use and collect data.	Consider management sites in the park.
	c. Interagency agreement to implement Landsat information system.	
3. The Blackfeet Tribe has proposed the development of a year-round recreational area near the east boundary of the park which could generate development and visitor-use impacts to park resources.	a. Work closely with the Tribe in evaluating and mitigating the adverse impacts of this project.	

OBJECTIVE: To cooperate with private landowners to promote environmentally compatible use of private lands within the park.

ISSUES	CURRENT RESPONSE	FUTURE RESPONSE
1. There remains 701 acres of private land within the park and a need to identify and protect park values on private lands. 1,2,9.	a. Prepared draft land protection plan. b. Intensified efforts to communicate with private landowners on park value protection issues.	Implement land protection plan.
2. There is a need to determine the extent of development permitted on developed and undeveloped private lands and to establish criteria to acquire fee or less-than-fee interests in private property. 1,2,9.		

An Act to establish "The Glacier National Park" in the Rocky Mountains south of the international boundary line, in the State of Montana, and for other purposes, approved May 11, 1910 (36 Stat. 354)

Glacier National Park, Mont. Lands set aside as. Description.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the tract of land in the State of Montana particularly described by metes and bounds as follows, to wit: Commencing at a point on the international boundary between the United States and the Dominion of Canada at the middle of the Flathead River; thence following southerly along and with the middle of the Flathead River to its confluence with the Middle Fork of the Flathead River; thence following the north bank of said Middle Fork of the Flathead River to where it is crossed by the north boundary of the right of way of the Great Northern Railroad; thence following the said right of way to where it intersects the west boundary of the Blackfeet Indian Reservation; thence northerly along said west boundary to its intersection with the international boundary; thence along said international boundary to the place of beginning, is hereby reserved and withdrawn from settlement, occupancy, or disposal under the laws of the United States, and dedicated and set apart as a public park or pleasure ground for the benefit and enjoyment of the people of the United States under the name of "The Glacier National Park;" and all persons who shall locate or settle upon or occupy the same, or any part thereof, except as hereinafter provided, shall be considered trespassers and removed therefrom: *Provided*, That nothing herein contained shall affect any valid existing claim, location, or entry under the land laws of the United States or the rights of any such claimant, locator, or entryman to the full use and enjoyment of his land: *Provided further*, That rights of way through the valleys of the North and Middle forks of the Flathead River for steam or electric railways may be acquired within said Glacier National Park under filings or proceedings heretofore or hereafter made or instituted under the laws applicable to the acquisition of such rights over or upon the unappropriated public domain of the United States, and that the United States Reclamation Service may enter upon and utilize for flowage or other purposes any area within said park which may be necessary for the development and maintenance of a Government reclamation project: *And provided further*, That no lands within the limits of said park hereby created belonging to or claimed by any railroad or other corporation now having or claiming the right of indemnity selection by virtue of any law or contract whatsoever shall be used as a basis for indemnity selection in any State or Territory whatsoever for any loss sustained by reason of the creation of said park. (U.S.C., title 16, sec. 161.)

Removal of trespassers. *Provisos.* Valid rights not affected. Rights of way for railways. (Repealed by 46 Stat. 1043. See p. 151.)

No indemnity selections allowed corporations.

Regulations for protection, etc.

Sec. 2. That said park shall be under the executive control of the Secretary of the Interior, whose duty it shall be, as soon as practicable, to make and publish such rules and regulations not inconsistent with the laws of the United States as he may deem necessary or proper for the care, protection, management, and improvement of the same, which regulations shall provide for the preservation of the park in a state of nature so far as is consistent with the purposes of this act, and for the care and protection of the fish and game within the boundaries thereof. Said Secretary may, in his discretion, execute leases to parcels of ground not exceeding ten acres in extent at any one place to any one person or company, for not to exceed twenty years, when such ground is necessary for the erection of buildings for the accommodation of visitors, and to parcels of ground not exceeding one acre in extent and for not to exceed twenty years to persons who have heretofore erected or whom he may hereafter authorize to erect summer homes or cottages; he may also sell and permit the removal of such matured or dead or down timber as he may deem necessary or advisable for the protection or improvement of the park. (U.S.C., title 16, sec. 162.)

Leases for hotels, etc. (This act so far as it relates to use of Glacier National Park land for summer homes and cottages repealed by 46 Stat. 1043, sec. 3. See p. 151.)

Removal of dead, etc., timber.

*U.S. GOVERNMENT PRINTING OFFICE: 1985-0-676-901/45048